ACCESSION NR: AP4032879 S/0051/64/016/004/0712/0713

AUTHOR: Avdeyenko,A.A.; Akopov,V.M.; Kramarenko,N.L.; Naboykin,Yu.V.; Shklyarevskiy, I.N.

TITLE: Concerning measurement of high reflection coefficients

SOURCE: Optika i spektroskopiya, v.16, no.4, 1964, 712-713

TOPIC TAGS: reflection coefficient, reflection coefficient measurement, mirror, silver mirror

ABSTRACT: In connection with designing interference instruments (for example, Fabry-Perot etalons) and lasers it is essential to know the reflection coefficient of the mirror components, and the higher the coefficient the more important is accuracy of the measurement result. In the present paper there is proposed a procedure and setup, based on multiple reflection, designed for accurate measurement of the reflection coefficients of mirrors with a high coefficient. The requisite evaluation formulas for two-fold and eight-fold reflection (the latter was employed by the authors) are adduced. A diagram of the setup is shown; it consists essentially of a collimated source, a beam splitting plate, and an appropriate photocell with a

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ACCESSION NR: AP4032879

frosted glass window. The setup and procedure were used to determine the reflection coefficients of three silver mirrors, prepared by simultaneous vacuum evaporation, for wavelengths of 550, 600 and 650 mμ; the estimated measurement accuracy is within ±0.4%. Orig. art.has: 3 formulas, 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 26Jul63 ENCL: 00

SUB CODE: OP NR REF SOV: 001 OTHER: 003

Card 2/2

L 43757-66 EWP(e)/EWT(m) WH
ACC NR: AP6030711 SOURCE CODE: UR/0368/66/005/002/0153/0157

AUTHOR: Naboykin, Yu. V.; Kramarenko, N. L.; Akopov, V. M. 58 B

ORG: none

TITLE: Investigation of multilayer dielectric coatings made from lead monoxide and cryolite

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 2, 1966, 153-157

TOPIC TAGS: light filter, optic filter, ceramic film, metal film, dielectric layer, dielectric coating, laser R and D, optical resonator

ABSTRACT: Laser engineering requires coatings possessing high reflection coefficients, good stability, and resistance to high-density electromagnetic radiation. Traditionally, the dielectric mirrors used in lasers have been made from zinc sulfide and cryolite. The present article deals with an investigation of multilayer dielectric mirrors made from lead monoxide and cryolite with a view to determining whether such mirrors, which are easier to produce than the zinc sulfide type, can be successfully employed in lasers. Specially purified lead monoxide was used in producing layers with minimum absorption. The optical characteristics (reflection, transmission, and absorption—R, T, and A, respectively) of the mirrors were then measured by an instal-

Card 1/3 UDC: 535.345.6:666.246

ACC NR: AP6030711

Table 1. Optical characteristics of interference light filters

Type of filter	λ, Å	T_0, %	Halfwidth of light filter $\delta\lambda$, Å
Glass-HLHLH-2-2L-HLHLH-air	5300	75,0	30
Glass-H'LH'LH'LH'-2L-H'LH'LH'LH'-glass	5200	75,0	40

Explanation: 1) H - PbO layer, H' - ZnS layer, L - cryolite layer;
2) the thickness of all layers is equal to $\lambda/4$.

lation consisting of a monochromator, an optical device, and a photomultiplier with a galvanometer. A nine-layer mirror with maximum reflection at 5780 Å had the following parameters: R = 97.0%, T = 1.0%, and A = 2.0%. Interference filters prepared from lead monoxide and cryolite were fully as good as optical filters made from zinc sulfide and cryolite. The optical characteristics of an eleven-layer optical filter made from lead monoxide and cryolite and a fifteen-layer filter made from zinc sulfide and cryolite are compared in Table 1. For

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ACC NR: AP6030711

similar filter parameters the lead monoxide-cryolite filter requires fewer layers than the zinc sulfide-cryolite filter. The layers improve their characteristics with time. Thus, the optical characteristics of an eleven-layer light filter two weeks after being removed from vacuum had improved as follows: transmission increased to the maximum, absorption decreased, and reflection remained constant. Orig. art. has: 3 figures and 1 table. [JA]

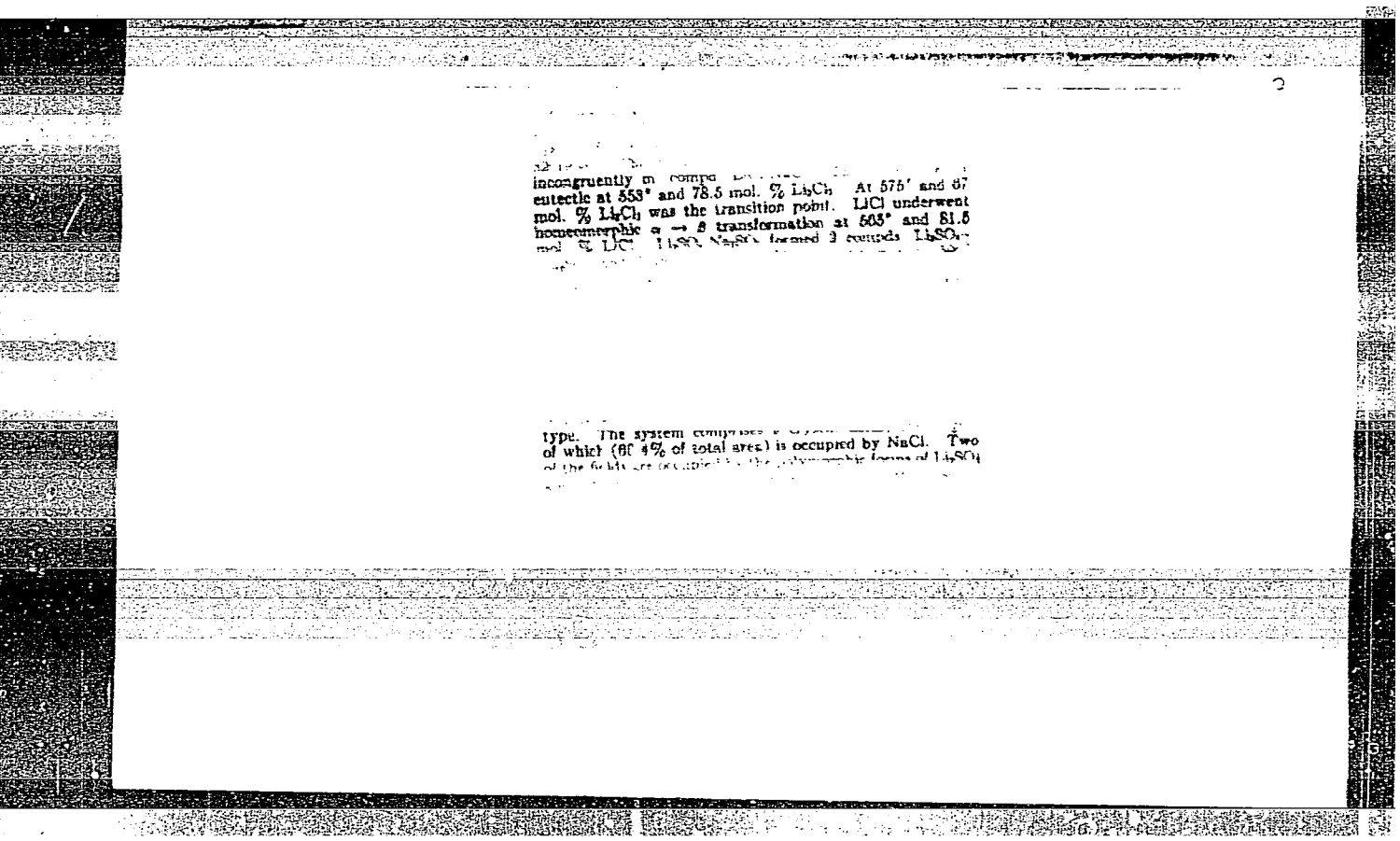
SUB CODE: 20/ SUBM DATE: 28Feb65/ ORIG REF: 004/ OTH REF: 002
ATD PRESS: 5075

Card 3/3 blg

ODESSKAYA-MEL'NIKOVA, L.A., AKOPOV, V.P., ODESSKIY, I.N.

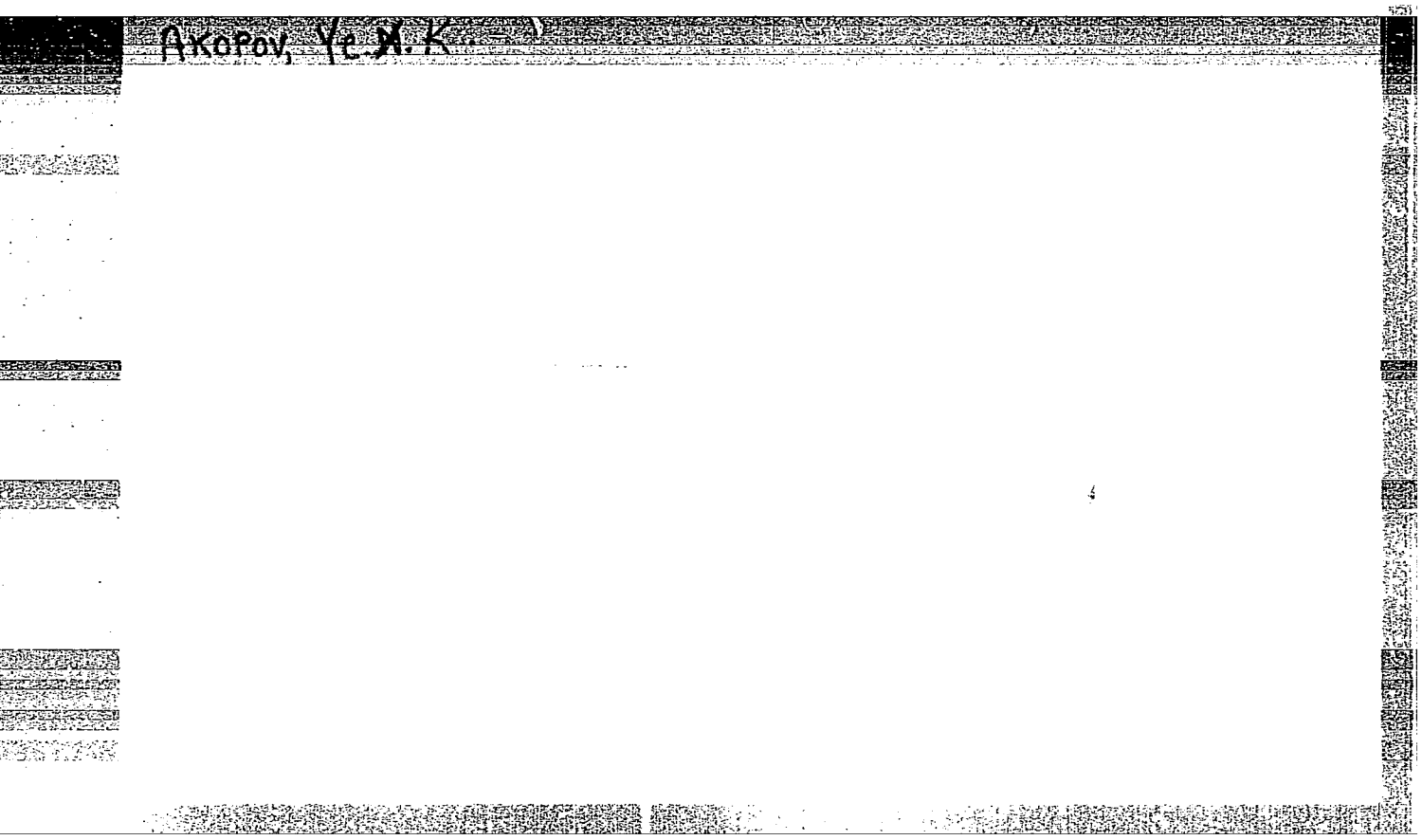
"Vertebra plana" or Calve's syndrome. Probl.tub. 36 no.4:113-114 '58 (MIRA 11:7)

1. Iz tret'yey kafedry rentgenologii (zav. - prof. I.L. Tager) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. V.P. Lebedeva) otdeleniy Klinicheskoy bol'nitsy imeni N.A. Semashko Ministerstva putey soobshcheniya i iz 12-y Moskovskiy gorodskoy bol'nitsy (glavnyy vrach V.G. Bryukhanov).
(SPONDYLITIS, case reports
vertebra plana (Rus))



incongruently m compo
eutectic at 553° and 78.5 mol. % Li_2Cl_2. At 575° and 67
mol. % Li_2Cl_2 was the transition point. LiCl underwent
monotropic $\alpha \rightarrow \beta$ transformation at 605° and 81.5
mol % LiCl. Li_2SO_4, Na_2SO_4 formed 3 compds Li_2SO_4

type. The system comprises
of which (68.4% of total area) is occupied by NaCl. Two
of the fields are occupied by the polymorphic forms of Li_2SO_4



AKOPOV, YE. K.

USSR/Chemistry

Card 1/1 ; Pub. 151 - 7/42

Authors : Akopov, E. K., and Bergman, A. G.

Title : Interrelation of lithium-, sodium and potassium sulfates in fusions. Ternary lithium, sodium and potassium sulfate-system

Periodical : Zhur. ob. khim. 24/9, 1512-1523, Sep 1954

Abstract : The ternary system consisting of Li_2SO_4, Na_2SO_4 and K_2SO_4 was investigated by the fusibility method. The existence of two internal phases - ternary complexes- in the system, was established. One ternary eutectic and 9 ternary transition points were observed in the system at 512°. Triangulation of the entire system was carried out on ten phase triangles. The structural diagram of the system, consisting of ten crystallization fields, is described. Two references: 1-USA and 1-German (1907 and 1908). Tables; diagrams.

Institution : State University and the Kuban Agricultural Institute, Rostov/Don

Submitted : August 31, 1953

AKOPOV, E. K.

USSR/Chemistry

Card 1/1 : Pub. 151 - 8/42

Authors : Akopov, E. K., and Bergman, A. G.

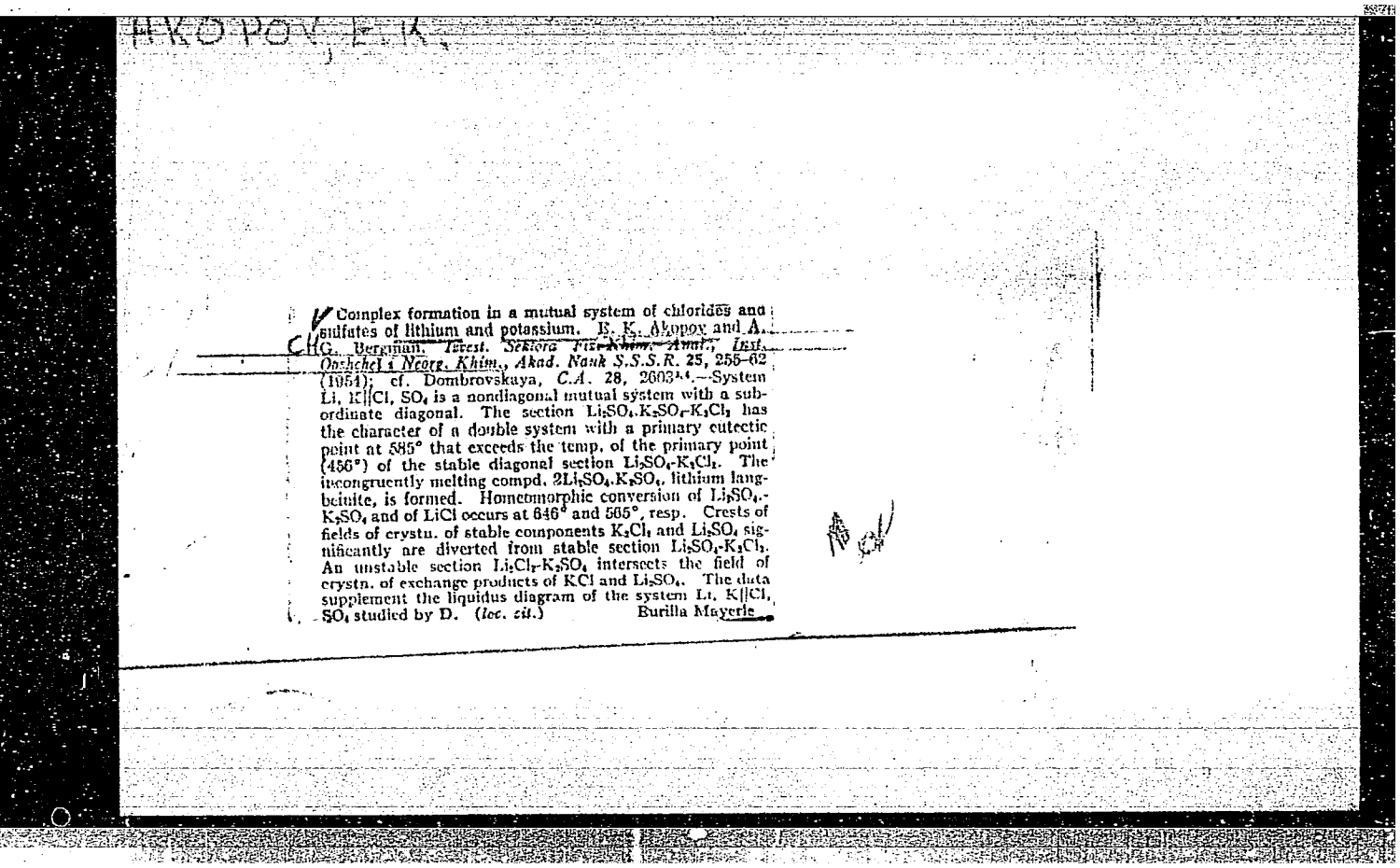
Title : Reversibly-adiagonal sodium and potassium chloride and sulfate system

Periodical : Zhur. ob. khim. 24/9, 1524-1532, Sep 1954

Abstract : The chemical and structural properties of the Na, K||Cl, SO_4 system, which is a reversibly-adiagonal mutual system with conditional thermal interchange reaction effect and triangulation emanating from the compositional pole of the $2Na_2SO_4 \cdot K_2SO_4$ compound, are described. The existence of one ternary eutectic point and two transition points was established at 514°. The triangulation square of the reciprocal system is divided into three triangle phases. The structural diagram, made up of three basic crystallization fields, is described. Seven references: 6-USSR and 1-German (1905-1954). Tables; diagrams.

Institution : State University, Rostov/Don

Submitted : August 31, 1953



Complex formation in a mutual system of chlorides and sulfates of lithium and potassium. E. K. Akopov and A. G. Bergman. *Trest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.R.* 25, 255–62 (1954); cf. Dombrovskaya, *C.A.* 28, 2603⁴.—System Li, K||Cl, SO_4 is a nondiagonal mutual system with a subordinate diagonal. The section Li_2SO_4-K_2SO_4-K_2Cl_2 has the character of a double system with a primary eutectic point at 585° that exceeds the temp. of the primary point (456°) of the stable diagonal section Li_2SO_4-K_2Cl_2. The incongruently melting compd. $2Li_2SO_4.K_2SO_4$, lithium langbeinite, is formed. Homeomorphic conversion of Li_2SO_4-K_2SO_4 and of LiCl occurs at 646° and 565°, resp. Crests of fields of crystn. of stable components K_2Cl_2 and Li_2SO_4 significantly are diverted from stable section Li_2SO_4-K_2Cl_2. An unstable section Li_2Cl_2-K_2SO_4 intersects the field of crystn. of exchange products of KCl and Li_2SO_4. The data supplement the liquidus diagram of the system Li, K||Cl, SO_4 studied by D. (*loc. cit.*) Burilla Mayerle

AKOPOV, E. K.

6

Stable section Li_2SO_4-Na_2Cl_2-K_2Cl_2 of quadruple mutual system of chlorides and sulfates of lithium, sodium, and potassium. E. K. Akopov and A. G. Bergman. *Trest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.R.* 25, 263–7(1954).—The system Na_2Cl_2–K_2Cl_2–Li_2SO_4 is a stable section of the complex mutual system Li, Na, K||Cl, SO_4. It is a simple triple system with eutectic point 426° and compn. K_2Cl_2 24, Na_2Cl_2 17, and Li_2SO_4 59%. From this stable section of a prism (which graphically represents the system Li, Na, K||Cl, SO_4) are split off stable tetrahedrons with vertexes Li_2Cl_2–Na_2Cl_2–K_2Cl_2–Li_2SO_4. Eurilla Muyerle

(1)

Abrosov, E. K.

USSR

Relation of the sulfates of lithium, sodium, potassium, and thallium in melts. E. K. Abrosov and A. G. Bergman (Agr. Inst., Kuban and V. M. Molotov State Univ., Rostov-on-Don). *Izvestiya Akad. Nauk S.S.S.R.* 95, 823-6(1954).—A report of a study of melts by the visual-polythermal method. The temp. of crystn. of the melts was measured by a Pt/Pt-Rh-Au-Pd-Pt thermocouple of 0.5 mm. diam. and a millivoltmeter. Two ternary systems, Li, Na, K, SO$_4$, and Li, K, Tl$_2$SO$_4$, were studied for the first time. Results of the detns. are presented in the form of compn. diagrams and a table. Gladys S. Macy

Akopov, Ye. K.

USSR/Physical Chemistry. Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14697

Author : Ye. K. Akopov, A. G. Bergman
Inst : -
Title : Quaternary Reciprocal System of Lithium, Sodium and Potassium Chlorides and Sulfides. Report 1

Orig Pub: Zh. obshch. khimii, 1955, 25, vyp. 1, 3-12

Abstract: Liquidus graphs of two systems: Na_2SO_4-Li_2SO_4-K_2Cl_2 (I) and Li_2SO_4-K_2SO_4-Na_2Cl_2 (II) were studied by the visual-polythermal method. These systems are interior instable sections of the quaternary reciprocal system Li, Na, K // Cl, SO_4. The binary compound $2Li_2SO_4 \cdot K_2SO_4$ melting and dissociating at 550° was disclosed. The composition of the quaternary transition point of the system Li, Na, K // Cl, SO_4 (section II) corresponds to 24 percent of Na_2Cl_2, 51 percent of Li_2SO_4, 25 percent of K_2SO_4, the temperature is 436°.

Card 1/1

АКОПОВ Ye. K.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 20/49

Authors : Akopov, Ye. K., and Bergman, A. G.

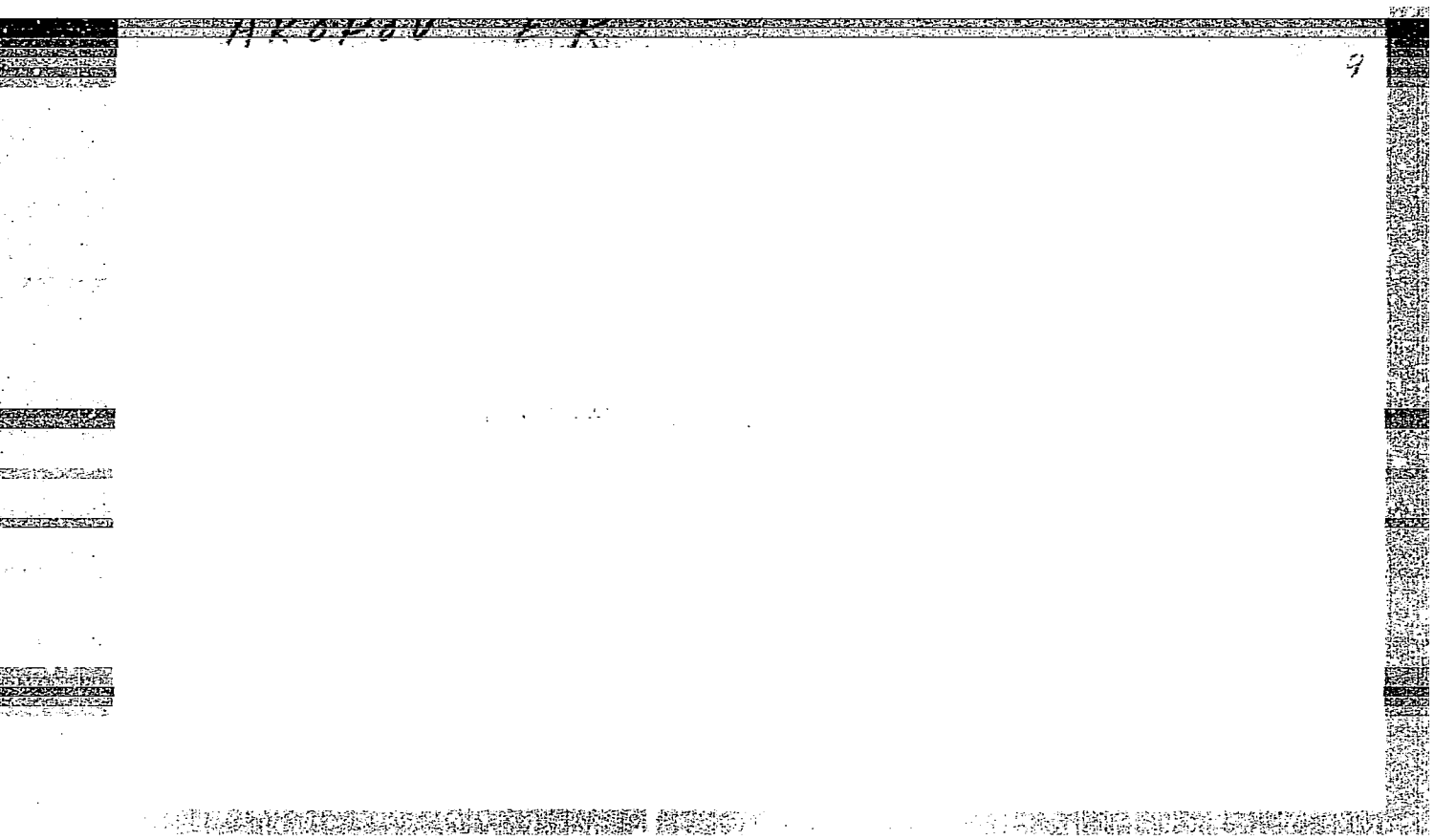
Title : Complex formation between lithium, sodium and potassium sulfates and chlorides in fusions

Periodical : Dok. AN SSSR 102/1, 81-83, May 1, 1955

Abstract : Visual-polythermal investigation was conducted of sulfates and chlorides of Li, Na and K to determine the complex formation between these compounds. The data pertaining to the Li, Na || Cl, SO_4 system show new essential changes in the isomorphism of Li and Na salts. It was found that isomorphism does not exist between these substances and the ion radii are also different. The properties of the complex incongruent compounds formed between these substances during fusion are described. Seven references: 4 USSR and 3 German (1907-1949). Diagrams.

Institution : The Kuban Agr. Inst. and the Rostov State Univ. im. V. M. Molotov

Presented by : Academician S. I. Vol'fkovich, January 1, 1955



Akopov, Ye.K.

Category : USSR/Solid State Physics - Systems E-4

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3794

Author : Akopov, Ye.K.
Title : Triple System of Chlorides of Lithium, Sodium and Potassium.

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 5, 1019-1025

Abstract : The diagram of state of LiCl-NaCl-KCl was investigated by the visual-polythermic method. The chlorides of Li and Na form the compound LiCl-NaCl, which melts and decomposes at 575°. In the double system LiCl-NaCl, the eutectic point LiCl + LiCl. NaCl corresponds to 553° and 78.5 molar percent LiCl, and the transition point corresponds to 575° and 67 molar percent of LiCl. A transformation of LiCl of the second kind was observed at 565° and 81.5% LiCl. The LiCl KCl salts form a simple eutectic system, while the NaCl and KCl salts form a system with a continuous series of solid solutions in a minimum melting temperature at 658° and 50% of the components. The triple system can be subdivided into two subsystems: LaCl. NaCl-LiCl-KCl with a eutectic point at 346°, 55% LiCl, 9% NaCl, 36% KCl, and LiCl. NaCl-NaCl-KCl with a transition point

Card : 1/2

Kuban Agricultural Inst.

Category : USSR/Solid State Physics - Systems E-4

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3794

at 384° and 53% LiCl, 13% NaCl, and 34% KCl (in molar percent). A diagram of the crystallization surface consists of five fields: α LiCl, LiCl, NaCl, KCl and LiCl. NaCl. The phases of NaCl and KCl separate upon decomposition of the solid NaCl-KCl solutions between 550 and 600°.

Card : 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100710011-0"

AKOPOV, Ye.K.; BERGMAN, A.G.

Interrelation between fused alkali metal sulfates and thallium. Part 1: The ternary system of lithium, potassium, and thallium sulfates. Zhur. neorg. khim. 2 no.1:193-200 Ja '57. (MLRA 10:4)

1. Kubanskiy sel'skokhozyaystvennyy institut, Kafedra organicheskoy, fizicheskoy i kolloidnoy khimii.
(Alkali metal sulfates) (Thallium sulfates)
(Systems (Chemistry))

Akopov, Ye.K.

574

AUTHORS: Akopov, E.K. and Bergman, A.G.

TITLE: Fusion Diagram of the Quaternary System Li_2Cl_2 - Na_2Cl_2 - K_2Cl_2 - Li_2SO_4. (Diagramma Plavkosti Chetvernoy Sistemy Li_2Cl_2-Na_2Cl_2-K_2Cl_2- Li_2SO_4.)

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol.II, No.2, pp.383-394. (U.S.S.R.)

ABSTRACT: The phase diagram of the quaternary reciprocal system Li, Na, K, ‖ Cl, SO_4, is represented by a prism. The prism is divided by the stable section Na_2Cl_2 - K_2Cl_2 - Li_2SO_4, as previously shown by the authors[1], into a stable tetrahedron Li_2Cl_2 - Na_2Cl_2 - K_2Cl_2- Li_2SO_4 and a five point shape Na_2Cl_2 - K_2Cl_2 - Li_2SO_4 - Na_2SO_4 - K_2SO_4. The present work deals with the tetrahedron.

The fusion method was used for the investigation, the salts being melted in a platinum crucible with a platinum stirrer. A Pt - Rh | Pt - Au - Pd thermocouple was used.

The formation of the compound LiCl.NaCl, melting with decomposition at 575°C, was confirmed. The solid solutions of sodium and potassium chlorides inside the system separate into their components, the decomposition temperature for the system Li, Na,

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5(4) SOV/78-4-5-33/46

AUTHORS: Akopov, Ye. K., Bergman, A. G.

TITLE: The Melting Diagram of the Three-component System Consisting of Sulphates of Lithium, Sodium, and Potassium (Diagramma plavkosti troynoy sistemy iz sul'fatov litiya, natriya i kaliya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 5, pp 1146-1152 (USSR)

ABSTRACT: The melting diagram of the three-component system consisting of sulphates of lithium, sodium, and potassium was investigated by means of the visual-polythermal method. 32 sections, the intersection points, and the melting temperatures were investigated and the results obtained are shown by table 1. The internal sections of the system are represented in figures 1 and 2. The sequence of the internal sections in the system Li, Na, K || SO_4 are shown by figure 3. Figure 4 shows the complete projection of the melting diagrams, and figure 5 the projection of the three-component system of the outer side of the triangle $LiSO_4$ through the vertex K_2SO_4. The crystallization surface of this system consists of 19 regions

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SOV/78-4-5-33/46

The Melting Diagram of the Three-component System Consisting of Sulphates of Lithium, Sodium, and Potassium

of solid solutions of sodium- and potassium sulphate, which partly decomposes into the components K_2SO_4 and Na_2SO_4, of two crystallization regions of the α- and β-modification of Li_2SO_4, of four crystallization regions of the double bonds $Li_2SO_4 \cdot Na_2SO_4$, $Li_2SO_4 \cdot 2Na_2SO_4$, $2Li_2SO_4 \cdot K_2SO_4$ and $Li_2SO_4 \cdot K_2SO_4$. The compound $Li_2SO_4 \cdot K_2SO_4$ decomposes into the α- and β-modification. The results obtained show that complicated interactions between sulphates and alkali metals occur in the system. There are 5 figures, 2 tables, and 2 Soviet references.

ASSOCIATION: Kubanskiy sel'skokhozyaystvennyy institut (Kuban' Agricultural Institute)

SUBMITTED: February 21, 1958

Card 2/2

5(2) SOV/78-4-7-32/44

AUTHORS: Akopov, Ye. K., Bergman, A. G.

TITLE: On the Decay of Solid Solutions in the Combined System of Chlorides and Sulfates of Sodium and Potassium (O raspade tverdykh rastvorov vo vzaimnoy sisteme iz khloridov i sul'fatov natriya i kaliya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1653-1656 (USSR)

ABSTRACT: The ternary systems of Li-, Na- and potassium sulfate and the quaternary systems Li, Na, K ‖ Cl, SO_4 were investigated in an earlier paper (Ref 1). It was found that the decay of the continuous solid solutions of sodium- and potassium sulfate is accompanied by the formation of three independent phases of double salts, which are formed if the temperature drops to 686°-736°. The present paper supplies data concerning newly investigated cross sections and a final diagram of the entire system. Figure 1 shows the melting curve in the diagonal section K_2Cl_2 - Na_2SO_4. 20 internal cross sections, their cross sections and melting temperatures were investigated (Figs 1,2). Table 1 gives the most important results, and figure 3 the

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On the Decay of Solid Solutions in the Combined System of Chlorides and Sulfates of Sodium and Potassium

position of the internal cross sections. A remarkable fact is the occurrence of independent internal phases I, II, and III by the decay of the solid solutions. The composition of these internal phases has as yet not been found. Figure 4 shows the projection of the melting diagram of the system Na, K || Cl, SO_4 constructed on the basis of the data obtained. There are 4 figures, 2 tables, and 3 references, 2 of which are Soviet.

ASSOCIATION: Kubanskiy sel'skokhozyaystvennyy institut (Kuban' Agricultural Institute)

SUBMITTED: April 4, 1958

5(2,4)
AUTHORS: Akopov, Ye. K., Bergman, A. G. SOV/20-127-3-19/71

TITLE: Complex Formation and Phase Transformations in a Quaternary Reciprocal System of Chlorides and Sulphates of Lithium, Sodium and Potassium

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 549-552 (USSR)

ABSTRACT: It proved that the complex formation between salts is much richer and more manifold in meltings than it is in the aqueous solutions of the same salts. The latter fact is due to a considerable hydration of the salts which, in many cases, is stronger than the complex formation (figure 1 shows the meltability diagram of the complex mentioned in the title). Only one compound of the Na and K sulphates (frequently found in deposits of potassium sulphate) could be found: Na, $K_3(SO_4)_2$ called glaserite. If water is absent, there exists also a compound which develops during the decomposition of solid solutions of the mentioned elements at temperatures below 476°.

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These solid solutions, however, decompose in the ternary system of Li, Na, $K \| SO_4$ at a temperature reduced to 784-816°, and form 3 compounds. Neither was it possible to find their exact composition or to prove the identity of a compound with one of them (stable below 476°). The decomposition temperature of these solid solutions is, however, reduced by the presence of the chlorides of the same elements. The thermodynamic conditions are of greatest importance for the complex formation, especially in the presence of other components in the liquid phase. All this proves the great importance of medium and solvent for the complex formation. The investigation of meltings of the systems mentioned in the title (Fig 1)(Refs 1-9) proved 17 complex compounds. Five of them are double salts. The different phases are graphically represented in the areas of a trihedral prism (Fig 2). Three phases develop [I], [II], [III] in the decomposition of solid solutions of the sulphates of Na and K. The investigation of the meltings of this quaternary system (Fig 1) showed an extraordinary complexity

of the components which is similar to silicates and borates. Figure 2 shows that sulphates of Li and Na form 2 compounds while their chlorides form only one single compound. There exist also 2 compounds among the corresponding sulphides. In the system Li, Na, K $\parallel SO_4$ there exist 5 inner phases: [IV], [V], [VI], [VII], and [VIII] which are three-fold sulphates. More than 8,000 points of the crystallizing temperatures were determined for the complete investigation of the meltability diagram of the system under discussion. On the basis of these data, complete investigations of the melting diagrams of 24 cross sections (triangular and square) through the prism were carried out. Figure 3 shows the mentioned diagram of a vertical section, while figure 4 shows a horizontal one. By means of these cross sections 4 phases could be found: [IX], [X], [XI], and [XII]. All of them are quaternary hetero-ionic compounds. There are 4 figures, 1 table, and 9 Soviet references.

Complex Formation and Phase Transformations in a Quaternary Reciprocal System of Chlorides and Sulphates of Lithium, Sodium and Potassium SOV/20-127-3-19/71

ASSOCIATION: Kubanskiy sel'skokhozyaystvennyy institut (Kuban' Agricultural Institute). Rostovskiy inzhenerno-stroitel'nyy institut (Rostov Civil Engineering Institute)

PRESENTED: March 25, 1959, by S. I. Vol'fkovich, Academician

SUBMITTED: March 25, 1959

Card 4/4

S/078/60/005/06/11/030
B004/B014

5.4110
5.2620

AUTHORS: Akopov, Ye. K., Bergman, A. G.

TITLE: The Complicated Formation of Complex Compounds in the Quaternary Reciprocal System From the Chlorides and Sulfates of Lithium, Sodium, and Potassium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 6, pp. 1257 - 1266

TEXT: A much more complicated formation of complex compounds than has so far been assumed was found in the prism of the quaternary system Li, Na, K ‖ Cl, SO_4 reproduced in Fig. 1. The salts of this system form complex compounds in the binary, ternary, and reciprocal ternary systems which are components of the quaternary system. The authors offer the melting-point diagrams of the systems Li, Na, K ‖ SO_4, Li, Na, K ‖ Cl, Li, Na ‖ Cl, SO_4, Li, K ‖ Cl, SO_4, Na, K ‖ Cl, SO_4 (Fig. 2), horizontal sections through the quaternary system (Figs. 3a, 4,5), diagonal sections

Card 1/3

The Complicated Formation of Complex Compounds in the Quaternary Reciprocal System From the Chlorides and Sulfates of Lithium, Sodium, and Potassium

S/078/60/005/06/11/030
B004/B014

(Figs. 3b, 6, 7), "book sections" (Figs. 3v, 8-11), and parallel vertical sections (Figs. 3g, 12). Crystallization temperatures were determined for more than 8,000 compositions. The systems specified have 318 nonvariant and monovariant ternary points. Molten Li_2SO_4, Na_2SO_4, and K_2SO_4 enter into complicated interactions and form complex compounds with the composition 1 : 1 and 2 : 1. As hitherto unknown, 1:1-complexes of chloride are also formed. $Li_2SO_4 \cdot K_2SO_4$ undergoes a secondary conversion. Solid solutions of Na_2SO_4 and K_2SO_4 dissociate in the quaternary system under the formation of three independent phases, (I), (II), and (III), from binary complex compounds of these sulfates. These solid solutions dissociate in the system Na, K ‖ Cl, SO_4 at 686 - 736°C, in the system Li, Na, K ‖ SO_4 at 790 - 820°C. The internal phases (IV), (V), (VI), (VII), and (VIII) consisting of ternary sulfates were found in the system Li, Na, K ‖ SO_4. The phases (IX), (X), (XI), and (XII) are internal phases of the quaternary system, and are quaternary hetero-ionic complex

Card 2/3

compounds all of which contain five ions. The formation of such compounds between chlorides and sulfates of alkali metals has hitherto been unknown. There is no isomorphism between the salts of Li and Na in the quaternary system under consideration. Both the sulfates and the chlorides form double-salt complex compounds. The action of the medium upon the formation of complex compounds consists in that the introduction of chlorides of Li, Na, K into the melt of the sulfates of these elements facilitates crystallization from the pure sulfate melt. The guiding action of the solvent upon composition and form of some complex compounds was furthermore ascertained. The authors refer to M. A. Klochko (Ref. 8) and O. S. Dombrovskaya (Ref. 9). There are 12 figures and 18 references: 15 Soviet and 3 German.

ASSOCIATION: Kubanskiy sel'skokhozyaystvennyy institut (Kuban' Institute of Agriculture)

SUBMITTED: February 23, 1959

S/078/60/005/007/037/043/XX
B004/B060

AUTHOR: Akopov, Ye. K.

TITLE: Fusibility Curve of the Quaternary Reciprocal System From Chlorides and Sulfates of Lithium, Sodium, and Potassium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7, pp. 1577-1587

TEXT: The information submitted by the author in Refs. 3-15 was not sufficient to plot the fusibility curve for the Li, Na, K || Cl, SO_4 system. The author has, therefore, examined some more sections, and now discusses the resulting fusibility curve which, as projected onto the lateral face of the Li, Na || Cl, SO_4 prism, is presented in Figs. 3,4. Over 400 ternary points including 30 eutectic and transition points, and 8 points of the decomposition of Na_2SO_4 and K_2SO_4 solid solutions were found in all of the partial systems and sections. Data concerning 139 of these points are given in Table 1. The remaining points are nonvariant. The system furthermore

Card 1/3

contains 46 nonvariant quaternary points, interconnected by 139 monovariant curves, and 25 crystallization zones. Respective data are given in Table 2. The crystallization scheme was constructed on the basis of the fusibility curve. The system has 34 triangular binary sections. The subdivision of the system into 46 phase tetrahedra is shown in Figs. 8-10. The fusibility curve of this system is, thus, more complicated than the system of aqueous solutions of its components. The author thanks A. G. Bergman for a discussion. There are 10 figures, 2 tables, and 15 references: 14 Soviet and 1 German.

ASSOCIATION: Kubanskiy sel'skokhozyaystvennyy institut (Kuban' Agricultural Institute)

SUBMITTED: March 26, 1959

(Legend to the Figures). Fig. 3, Projection of the $Na_2Cl_2 - K_2Cl_2 - Li_2SO_4 - Na_2SO_4 - K_2SO_4$ system on the lateral face of the $Li,Na \parallel Cl,SO_4$,

Fusibility Curve of the Quaternary Reciprocal System From Chlorides and Sulfates of Lithium, Sodium, and Potassium

S/078/60/005/007/037/043/XX
B004/B060

2 - NaCl, 3 - KCl, 4 - Li_2SO_4, 6 - K_2SO_4, 9 - $Li_2SO_4 \cdot K_2SO_4$, 11 - $Li_2SO_4 \cdot Na_2SO_4$, 12 - $Li_2SO_4 \cdot 2Na_2SO_4$ prism, inner phases. Points 15,16, 17,18,19,20,21 refer to phase tetrahedra III - IX. I - quaternary eutectic point, II - quaternary transition point. (Legend to Fig. 4) Projection of the $Na_2Cl_2 - K_2Cl_2 - Li_2SO_4 - Na_2SO_4 - K_2SO_4$ system onto the lateral face of the $Li,Na \parallel Cl,SO_4$ prism (continued), 2 - NaCl, 3 - KCl, 5 - Na_2SO_4, 6 - K_2SO_4, 7 - $(Na,K)_2SO_4$, 12 - $Li_2SO_4 \cdot 2Na_2SO_4$. The following points refer to the corresponding phase tetrahedra: 13 - I, 14 - II, 15 - III, 16 - IV, 17 - V, 18 - VI, 21 - IX, 22 - X, 23 - XI, 24 - XII. I - quaternary eutectic point, II - quaternary transition point.

Card 3/3

AKOPOV, Ye.K.

Ternary system consisting of sodium potassium and thallium sulfates.
Zhur.neorg.khim. 6 no.5:1211-1218 My '61. (MIRA 14:4)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut, Krasnodarskiy uchebno-konsul'tatsionnyy punkt.

(Sodium sulfate) (Potassium sulfate) (Thallium sulfate)

S/078/62/007/002/009/019
B119/B110

AUTHOR: Akopov, Ye. K.

TITLE: Solubility polytherm of the LiCl - KCl - H_2O system

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 2, 1962, 385 - 389

TEXT: The solubility of LiCl and LiCl + KCl in H_2O was studied between the freezing point of the systems and +25°C and the equilibrium diagram of the ternary LiCl - KCl - H_2O system was constructed. The temperatures were established at which crystallization sets in on cooling and disappears on heating of the crystalline phase. The initial chemically pure substances LiCl and KCl were recrystallized and dissolved in appropriate quantities in distilled water. Results: The data obtained for the LiCl - H_2O system correspond to those of N. K. Voskresenskaya, O. K. Yanat'yeva (Ref. 6: Izv. AN SSSR, ser. khim., 1, 97 (1937)) and to further data (at -75°C: ice + $LiCl \cdot 5 H_2O$; -64.5°C: $LiCl \cdot 5 H_2O + LiCl \cdot 3 H_2O$; -18.0°C: $LiCl \cdot 3 H_2O + LiCl \cdot 2 H_2O$; +18.5°C: $LiCl \cdot 2 H_2O + LiCl \cdot H_2O$). Solubility of

Solubility polytherm of the...

KCl is strongly reduced by LiCl. Formation of KCl·n H_2O could be confirmed. The equilibrium diagram of the LiCl - KCl - H_2O system contains seven crystallization fields (corresponding to ice, KCl, LiCl·5 H_2O, LiCl·3 H_2O, LiCl·2 H_2O, LiCl·H_2O, KCl·n H_2O) which meet in five triple points, one of which (-78°C, 24.2% by weight LiCl, 0.8% KCl, 75.0% H_2O, ice+LiCl·5 H_2O + KCl) corresponds to an eutectic, whereas the other two represent transition points: P_1: -67°C: LiCl·5 H_2O + LiCl·3 H_2O + KCl; P_2: 19.5°C: LiCl·3 H_2O + LiCl·2 H_2O + KCl; P_3: -15°C: ice + KCl·n H_2O + KCl; P_4: +16°C: LiCl·2 H_2O + LiCl·H_2O + KCl. The largest diagram area is occupied by the crystallization field of KCl, the smallest by those of LiCl and KCl hydrates. P. I. Goncharov (Ref. 1: ZhRFKhO ch. khim., 61, 1534 (1929)); V. P. Blidin (Ref. 3: Dokl. AN SSSR, 88, 457 (1953)); V. Ye. Plyushchev, G. P. Kuznetsov, S. V. Stenina (Ref. 5: Zh. neorgan. khimii, 4, 1449 (1959)); M. P. Shul'gina, O. S. Kharchuk, O. K. Yanat'yeva (Ref. 9: Izv. Sektora fiz.-khim. analiza IONKh AN SSSR.

Card 2/3

26, 198 (1955)); I. G. Druzhinin, A. P. Yanko, are mentioned. There are 2 figures, 3 tables, and 9 references: 7 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: A. N. Campbell, E. M. Kartzwack. Canad. J. Chem., 34, N 5, 672 (1956).

ASSOCIATION: Vsesoyuznyy zaochnyy politekhnicheskiy institut (All-Union Correspondence Polytechnic Institute). Krasnodarskiy UKP (Krasnodar UKP)

SUBMITTED: December 14, 1960

AKOPOV, Ye.K.

Solubility polytherm of the ternary system LiCl - NaCl - H_2O.
Zhur. prikl. khim. 36 no.9:1916-1919 D '63. (MIRA 17:1)

1. Krasnodarskiy institut pishchevoy promyshlennosti.

AKOPOV, Ye.K.

Exchange decomposition and variation of the isobaric potential in melts. Dokl. AN SSSR 156 no. 3:598-600 '64. (MIRA 17:5)

1. Krasnodarskiy politekhnicheskiy institut. Predstavleno akademikom S.I.Vol'fkovichem.

Akopov, Ye.S.

AKOPOV, Ye.S.

Furrow irrigation technique for field and vegetable crops. Izv. AN Arm. SSR. Biol. i sel'khoz. nauki 10 no.9:65-73 S '57. (MLRA 10:11)

1. Institut gidrotekhniki i melioratsii Ministerstva vodnogo khozyaystva Armyanskoy SSR.
(Armenia--Irrigation farming)
(Field crops) (Vegetable gardening)

AKOPOV, Ye. S.

Cand Agr Sci - (diss) "Problems of the improvement of furrow irrigation techniques and methods of determining rational elements thereof under conditions of the Araratskaya Ravine of the Armenian SSR." Novocherkassk, 1961. 23 pp; (Ministry of Agriculture RSFSR, Novocherkassk Land Reclamation Engineering Inst); 150 copies; price not given; (KL, 5-61 sup, 196)

ČAKOPOV, Yu.R.

Automatic device for manufacturing grainy packings for distillation columns. Zav.lab. 28 no.6:749-750 '62. (MIRA 15:5)
(Packing (Mechanical engineering))

L 27831-65 EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EWP(b) Pr-4/Pu-4 IM

ACCESSION NR: AP5007358 .../64/017/005/0384/0393

AUTHOR: Akopov, Yu. R.; Gverdtsiteli, I. [illegible] V. A.; Partsakhashvili, O. L.

TITLE: Column packing used for isotopic separation 19

SOURCE: Atomnaya energiya, v. 17, no. 5, 1964, 384-393

TOPIC TAGS: isotopic separation

ABSTRACT: Requirements are formulated for the packings used for isotope separation in columns. The properties of various wire packings were studied, and the region of their use was determined. Orig. art. has: 6 tables, 10 graphs, 6 figures.

ASSOCIATION: none

SUBMITTED: [illegible] ENCL: 00 SUB CODE: GC

NO REF SOV: 011 OTHER: 014 NA

Card 1/1

S/081/62/000/023/084/120
B144/B186

AUTHORS: Fedotova, A. F., Stepanyan, E. G., Sadykhov, K. I., Akopova, A. A.

TITLE: Production of the additive СБ-3 (SB-3) in an industrial plant

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 595, abstract 23M215 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 5, 1962, 16 - 19)

TEXT: The process for obtaining the additive SB-3 (barium sulfonate) consists in the sulfonation of A-11 (D-11) oil by sulfuric anhydride, neutralization of the sulfonated oil with barium oxide, and centrifugation to separate the solid impurities. In the industrial apparatus sulfonation is carried out at 45 - 55°C with sulfur dioxide containing 7.66 % sulfuric anhydride until a tar-free acid oil with an acid number of 18 mg KOH/g is obtained (within 26 hrs). Yield in acid oil: 93.6%. Neutralization was carried out with dry BaO, consumed in a quantity of 10 - 11 % by weight, at 60 - 70°C, until weak-alkaline reaction occurred; then the reaction

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Production of the additive ... S/081/62/000/023/084/120
B144/B186

water was drawn off from the neutralized product at 95 - 130°C and with a residual pressure of 150 - 200 mm Hg. The filter press proved inadequate to liberate the additives from mechanical impurities, the content of which in the neutralized product reaches 1.7 - 2.0 %. Satisfactory results were obtained by using for this purpose a TB-800 (TV-800) centrifuge. However, this part of the process needs further development. The physico-chemical indices of the finished additive and the material balance of the industrial plant are given. [Abstracter's note: Complete translation.]

Card 2/2

LAVRENT'YEV, V.I. Prinimali uchastiye: POL'SHINSKIY, V.V., starshiy nauchnyy sotrudnik; AKOPOVA, A.A., starshiy nauchnyy sotrudnik: SHAYKHUTDINOVA, L.K.; inzh.; SHAGEYEVA, L.A.; inzh.; TUMANOVA, A.M., preparator; STAROSTIN, P.A., inzh.; BALAKHONOV, A.P., motorist; ARTEM'YEV, V.G., motorist.

Using the heavy residual fractions of Tatar sour crude as a fuel for gas turbines. Nefreper. i neftekhim. no.4:27-34 '63 (MIRA 17:7)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut.

BR

ACCESSION NR: AP4033109 S/0120/64/000/002/0064/0065

AUTHOR: Akopova, A. B.

TITLE: Spurious scattering in nuclear emulsions treated by ultrasonic radiation

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 64-65

TOPIC TAGS: nuclear emulsion, ultrasonic nuclear emulsion, spurious scattering, NIKFI-R nuclear emulsion, ultrasonics

ABSTRACT: An experimental investigation of the effect of 1.2 mc and 2.2 mc treatment of NIKFI-R 400-micron emulsion upon spurious scattering is reported. Emulsions irradiated in ITEF by 1.7-Gev protons were tested. The total length of the measured tracks exceeded 1.5 m. The measured average values of second differences (MBI-8M microscope, 250 cell) showed that the ultrasonically-treated emulsion had a spurious scattering considerably lower than the untreated emulsion. "In conclusion, the author is deeply grateful to A. I. Alikhanyan for

Card 1/2

ACCESSION NR: AP4033109

his interest in the work, A. G. Sal'man, Kh. B. Pachadzhan, and Ya. B. Tsal'man for their valuable advice in using the ultrasonic generator, and L. V. Melkumova for her part in the experimental work." Orig. art. has: 2 formulas and 2 tables.

ASSOCIATION: none

SUBMITTED: 13May63	DATE ACQ: 11May64	ENCL: 00
SUB CODE: NS	NO REF SOV: 003	OTHER: 001

Card 2/2

BR

ACCESSION NR: AP4033110 S/0120/64/000/002/0066/0068

AUTHOR: Akopova, A. B.; Pachadzhyan, Kh. B.; Melkumova, L. V.

TITLE: Photographic treatment of nuclear emulsions by ultrasonic radiation

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 66-68

TOPIC TAGS: nuclear emulsion, NIKFI-R nuclear emulsion, ultrasonic nuclear emulsion, ultrasonics, spurious scattering

ABSTRACT: As a result of extensive experimentation, the optimum conditions for the ultrasonic treatment of NIKFI-R 400-micron nuclear emulsion were found. Barium titanate was used as an ultrasonic radiator at 1,100 kc, 1.25 w/cm . Developer used: amidol, 3 g; sulfite, 12 g; citric acid, 1 g; water, 1 liter; diluted by 1:2 for pH = 6.4. The time of the ultrasonic treatment proved to be only one-fifth that for the conventional photographic treatment which is explained by accelerated diffusion phenomena. The emulsion sensitivity was found to be

Card 1/2

ACCESSION NR: AP4033110

unaltered, but the grainy fog was lower by 20-25%, and the distortion was considerably lower. "The authors deeply thank V. M. Kharitonov for his interest in the work, and N. A. Marutyan for his valuable advice during a discussion of the physical results." Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 13May63 DATE ACQ: 11May64 ENCL: 00

SUB CODE: NS NO REF SOV: 003 OTHER: 001

Card 2/2

AKOPOVA, A.B.; PACHADZHYAN, Kh.B.; MELKUMOVA, L.V.

Photographic treatment of nuclear emulsions by ultrasonic vibrations. Prib. i tekh. eksp. 9 no.2:66-68 Mr-Ap'64. (MIRA 17:5)

YERZINKYAN, L.A.; PAKHLEVANYAN, M.Sh.; CHARYAN, L.M.; AKOPOVA, A.B.

New nutrient media for the isolation of lactic acid bacteria.
Vop. mikrobiol. no.2:211-218 '64.
(MIRA 18:3)

AKOPOVA, A.B.

Effect of tanning agents on the treatment of nuclear emulsions by ultrasonic vibrations. Dokl. AN Arm. SSR 40 no.3:151-153 '65.
(MIRA 18:12)

1. Submitted September 25, 1964.

AKOPOVA, A.G.; KAZHLAYEV, M.D., zasluzhennyy deyatel' nauki, prof.

Simplified loop for tonsillectomy. Zhur. ush., nos. i gor'. bol. 23 no.4: 93-94 Jl-Ag'63. (MIRA 16:10)

1. Iz otorinolaringologicheskoy kliniki Azerbaydzhanskogo instituta usovershenstvovaniya vrachey.
(TONSILS — SURGERY)

SEMENOV, B.F.; BOGOMOLOVA, N.N.; AKOPOVA, I.I.

Multiplication of tick encephalitis viruses in primary cultures of hog embryo kidney epithelium cells. Vop.virus. 6 no.2:143-146 Mr-Ap '61. (MIRA 14:6)

1. Moskovskiy institut virusnykh preparatov, Moskva.
(ENCEPHALITIS)

DOSSER, Ye.M.; RAPOPORT, R.I.; YERMAKOVA, M.N.; AKOPOVA, I.I.; DOROFEYEV, V.M.

Production of monlayer cell cultures from the tissues of different animals. Vop.virus. 7 no.3:336-343 My-Je '61. (MIRA 14:7)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.
(TISSUE CULTURE)

KAMENKOVA, Ye.N., prof., otv.red.; AKOPOVA, I.L., red.; ZINOV'YEV, P.M., prof., red.

[Initial stages in mental diseases; collection of articles read at a meeting of the Institute of Psychiatry of the Academy of Medical Sciences of the U.S.S.R., June 1959] Nachal'nye stadii psikhicheskikh zabolevanii; sbornik nauchnykh rabot, dolozhennykh na sessii Instituta psikhiatrii AMN SSSR v iiune 1959 g. Moskva, 1959. 86 p. (MIRA 14:5)

1. Akademiya meditsinskikh nauk SSSR. Institut psikhiatrii.
(MENTAL ILLNESS)

AKOPOVA, I.L.

Typology of oneiroid catatonia. Zhur. nevr. i psikh. 65 no.11: 1710-1716 '65. (MIRA 18:11)

1. Klinika shizofrenii (zaveduyushchiy R.A.Nadzharov) Instituta psikhiatrii AMN SSSR, Moskva.

KATREFAZH, G.; SABAT'YE, F., ptitsevod (Monpel'ye, Frantsiya); AKOPOVA, K.P. [translator]

Practices in changing some hereditary characters; some interesting observations made on domestic fowl after the transfusion of blood from a different breed. Agrobiologiia n0.1:105-107 Ja-F '63. (MIRA 16:5)

1. Rukovoditel' tekhnicheskoy laboratorii pri Oblastnoy veterinarnoy laboratorii, Monpel'ye, Frantsiya (for Katrefazh).
(Heredity) (Blood—Transfusion) (Poultry—Physiology)

S/137/62/000/003/038/191
A006/A101

AUTHORS: Podkosov, L. G., Akopova, K. S., Romanovskaya, N. Ye.

TITLE: Collective flotation of titanium-zirconium sands

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 13, abstract 3086 ("Tr. Vses. n.-i. in-ta mineral'n. syr'ya", 1961, no. 6, 158 - 166)

TEXT: The authors investigated flotation of Ti-Zr sands of three deposits in a laboratory, and partially under industrial conditions. The basic mineral products of the deposits are: ilmenite, rutile, leucoxene, zircon; the sands of one of the deposits contain a considerable amount of alumosilicates. In the sands the ore mineral grains are finer than the dead rock (quartz). The sands can be well washed. The content of slime particles in the sands is on the average 15 - 20%. Tests were made with oleic acid, sulfate soap, soap-naphtha, soapstock, tall oil, oxidized petrolatum, ИМ-11 (IM-11) alkylsulfate etc. Tall oil is the most effective reagent. The investigations show the satisfactory flotability of the whole complex of heavy minerals. Highest flotation activity is shown by alumosilicates and zircon, and least by ilmenite and leucoxene. The selection of a collector is determined by its cost, availability, stability of properties, toxicity and by the

Card 1/2

S/137/62/000/003/038/191
A006/A101

Collective flotation of...

degree of difficulty of subsequent refining of the collective concentrate. Best results in basic flotation were obtained with sulfate soap at 6 kg/t consumption. In this case extraction of ZrO_2 was 97.3% and of TiO_2 94.04% of the initial ore. The tails contained in %: ilmenite 0.25, staurolite 0.13; disthene 0.25. A qualitative scheme of industrial tests is presented.

A. Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/002/024/144
A006/A101

AUTHORS: Akopova, K. S., Romanovskaya, N. Ye.

TITLE: Flotation separation of rutile and zircon

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 5, abstract 2G36 ("Tr. Vses. n.-i. in-ta mineral'n. syr'ya", 1961, no. 6, 167-172)

TEXT: A system is proposed for the concentration of Ti-Zr sands including the gravitational dressing of sands to obtain a collective concentrate, and refining by magnetic separation and flotation (separation of rutile and zircon). Flotation is performed with oleic acid and with the use of a Na-silicate (0.1 kg/t) depressor in dense pulps (solid : liquid = 1:2), the reagents being added in doses. As a result concentrates of the following composition in % were obtained: rutile concentrate - TiO_2 86.9 - 89.7; ZrO_2 1.6; SiO_2 0.9 - 1.85; P_2O_5 - 0.09-0.137; Al_2O_3 1.26; zircon concentrate - ZrO_2 63.4 - 65.8; TiO_2 0.3. ZrO_2 extraction into zircon concentrate was 90 - 93% from the initial sands; rutile extraction into rutile concentrate was about 85%. There are 8 references.

A. Shmeleva

[Abstracter's note: Complete translation]

Card 1/1

AKOPOVA, K.S.

Some new trends in the dressing of titanium-zirconium sands. Min.syr'ia no.9:58-62 '63. (MIRA 17:10)

AKOPOVA, R.

Organizing the production of endocrine preparations under laboratory conditions. Prom.Arm. 4 no.5:52-53 My '61. (MIRA 14:8)

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya Upravleniya myaso-molochnoy promyshlennosti Sovnarkhoza Armyanskoy SSR.

(Endocrinology)

AKOPOVA, R.

Central Scientific Research Laboratory of the Administration of the Meat and Dairy Industry of the Armenian Economic Council. Mias.ind. SSSR 33 [i.e.34] no.2:15-16 '63. (MIRA 16:4)

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya Upravleniya i molochnoy promyshlennosti Soveta narodnogo khozyaystva Armyanskoy SSR. (Armenia--Food research)

ZAKIROV, I.Z., dotsent; KHAMIDOV, G.K., dotsent; KALENDAREV, L.Ya.; AKOPOVA, R.A.

Some characteristics of Botkin's disease in pregnancy. Sov. med. 27 no.2:136-138 F '64. (MIRA 17:10)

1. Kafedra akusherstva i ginekologii (zav. - dotsent I.Z. Zakirov) i kafedra infektsionnykh bolezney (zav. - dotsent R.A. Tashpulatov) Samarkandskogo meditsinskogo instituta imeni Pavlova.

Akopova, R. N.

AKOPOVA, R.N.

Five-years' practice in the use of direct and early prosthesis. Stomatologiia 36 no.1:67 Ja-F '57. (MIRA 11:1)

1. Iz Kislovodskoy stomatologicheskoy polikliniki (glavnyy vrach D.I.Vasil'yev).
(DENTAL PROSTHESIS)

AKOPOVA, V.A., mladshiy nauchnyy sotrudnik

Morphological and histochemical changes in the spleen and lymph nodes of white mice subjected to irradiation and antigenic action. Vop. radiobiol. AN ARM. SSR 2:165-172 '61.

[illegible]nge in the amount of glycogen in leucocytes of the spleen subjected to irradiation and antigenic action. Ibid.:173-180

(MIRA 18:4)

ARUTYUNYAN, M.L., mladshiy nauchnyy sotrudnik; AKOPOVA, V.A., mladshiy nauchnyy sotrudnik; OVANESYAN, V.O., mladshiy nauchnyy sotrudnik.

Radioactivity of the skeleton of newborn children. Vop. radiobiol. [AN Arm. SSR] 3/4:201-204 '63. (MIRA 17:6)

AMBARTSUMOV, P.A.; RZAYEVA, S.B.; PODLISKER, Ye.B.; Prinimali uchastiye: BUYNITSKAYA, V.L.; AKOPOVA, Ye.N.; VLADIMIRSKAYA, G.I.; MAMEDOVA, S.P.

Using chromatographic methods for controlling the production of bivinyl from butane. Sbor. nauch.-tekh. inform. Azerb. inst. nauch.-tekh. inform. Ser. Nefteper. i khim. prom. no.2:30-34 '62. (MIRA 18:9)

1. Institut neftekhimicheskikh protsessov AN AzerSSR (for Buynitskaya, Akopova, Vladimirskaya, Mamedova).

AKOPOVA, Z.S.

Good experience in organizing business. Gor.khoz.Mosk. 35 no.5: 40a-40b My '61. (MIRA 14:6)
(Stores, Retail)

AKOPYAN, A.

47-58-2-30/30

AUTHORS: Los', G.A.; Khotyachuk, F.M.; Chupik, I.P.; Akopyan, A.

TITLE: Chronicle of School Work (Khronika raboty shkol)

PERIODICAL: Fizika v Shkole, 1958, Nr 2, p 96 (USSR)

ABSTRACT: 1) Pupils of the High School in Shurovchiki, Izyaslav region, Khmel'nitskiy Oblast', always co-operated with kolkhozes. They helped them in gathering crops, and the kolkhozes helped them in buying a power plant of 12 kw.
2) Pupils of 9th and 10th classes of the High School in Stavropol'-Kavkazskiy organized a reunion consecrated to new achievements in the fields of science and engineering.
3) During the past years the High School in Balludzhin, in the Azerbaydzhan SSR, bought more than 10,000 rubles worth of instruments and also received a wind operated electric power plant.

AVAILABLE: Library of Congress

Card 1/1 1. Group dynamics-USSR 2. Education-USSR

USCOMM-DC-54749

AKOPYAN, A., Candidate Med Sci (diss) -- "Kidney injuries in malaria". Baku, 1959. 16 pp (Azerb State Med Inst im N. Narimanov), 220 copies (KL, No 24, 1959, 148)

KAMALYAN, G.V.; AKOPYAN, A.A.

Effect of certain amines on blood coagulation. Dokl.AN ARM SSR 32 no.2:95-100 '61. (MIRA 14:3)

1. Yerevanskiy zooveterinarnyy institut. Predstavleno akademikom AN Armyanskoy SSR G. Kh. Bunyatyanom.
(BLOOD--COAGULATION)
(ETHANOL--PHYSIOLOGICAL EFFECT)

AKOPYAN, Az.

Stop contemptible practices in the management of capital construction. Prom.Arm. 4 no.8:12-14 Ag '61. (MIRA 14:8)

1. Upravleniye promyshlennosti stroitel'nykh materialov Sovnarkhoza Armyanskoy SSR.
(Armenia--Building materials)

AKOPYAN, Arshak Ayrapetovich DECEASED 1960 1962/7

Medicine

see ILC

АКОРЯН, А. А.

FEDOSEYEV, Dmitriy Nikolayevich, kandidat tekhnicheskikh nauk; AKOPYAN, A.A., inzhener, retsenzent; BULOVSKIY, P.I., kandidat tekhnicheskikh nauk, dotsent, redaktor; LEYKINA, T.L., redaktor izdatel'stva; SPERANSKAYA, O.V., tekhnicheskiy redaktor

[Planning technological processes of assembling apparatus] Proektirovanie tekhnologicheskikh protsessov sborki priborov. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 245 p. (MLRA 10:9)
(Machinery industry)

SOKOLOV, Nikolay Nikolayevich; ANDRIANOV, K.A., red.; AKOPYAN, A.A., red.; BIRYUKOV, V.G., glavnyy red.; BUTKEVICH, G.V., red.; GRANOVSKIY, V.L. red.; GERTSENBERG, G.R., red.; ZABYRINA, K.I., red.; PALITVYANSKIY, V.I., red.; KLYARFEL'D, B.N.; SAKOVICH, A.A.; TIMOFEYEV, P.V.; FASTOVSKIY, V.G.; TSEYROV, Ye.M.; FRIDMAN, A.Ya.; SHEMAYEV, A.M.; TIMOKHINA, V.I., red.

[Methods for the synthesis of organopolysiloxanes] Metody sinteza poliorganosiloksanov. Moskva, Gos.energ. izd-vo. 1959. 198 p. (Moscow. Vsesoiuznyi elektrotekhnicheskii institut. Trudy, no.66) (MIRA 12:5)

(Siloxanes)

Акопян, А.А.

AKOP'YAN, A.A., starshiy prepodavatel'; KRUGLOV, A.S., starshiy prepodavatel'; PLAVINSKIY, F.I., starshiy prepodavatel'.

Basic and determining problems in manufacturing instruments. Priborostroenie no.10:19-20 O '57. (MIRA 10:11)

1. LIAP

(Instrument industry) (Automatic control)

AUTHOR: Akopyan, A.A., Supervisor SOV/111-58-2-17/27

TITLE: How We Improve Service to the Subscribers (Kak my uluchshayem obsluzhivaniye abonentov)

PERIODICAL: Vestnik svyazi, 1958, Nr 2, pp 21 - 22 (USSR)

ABSTRACT: The management of the Rostov-na-Donu long distance telephone exchange made efforts to increase the profit of the enterprise. Coin telephones were installed in the town area, and by a reorganization, it was possible to handle 8,000 telephone calls with the same number of operators as in 1956, when 6,500 calls were processed. A number of deficiencies must still be eliminated. The employees of the telephone exchange are installing semiautomatic equipment, mechanical aids, and are increasing the number of communication channels to achieve a further increase in the station's profit. There are 2 photos.

ASSOCIATION: Rostovskaya-na-Donu mezhdugorodnaya telefonnaya stantsiya (Rostov-na-Donu Long-Distance Telephone Exchange)

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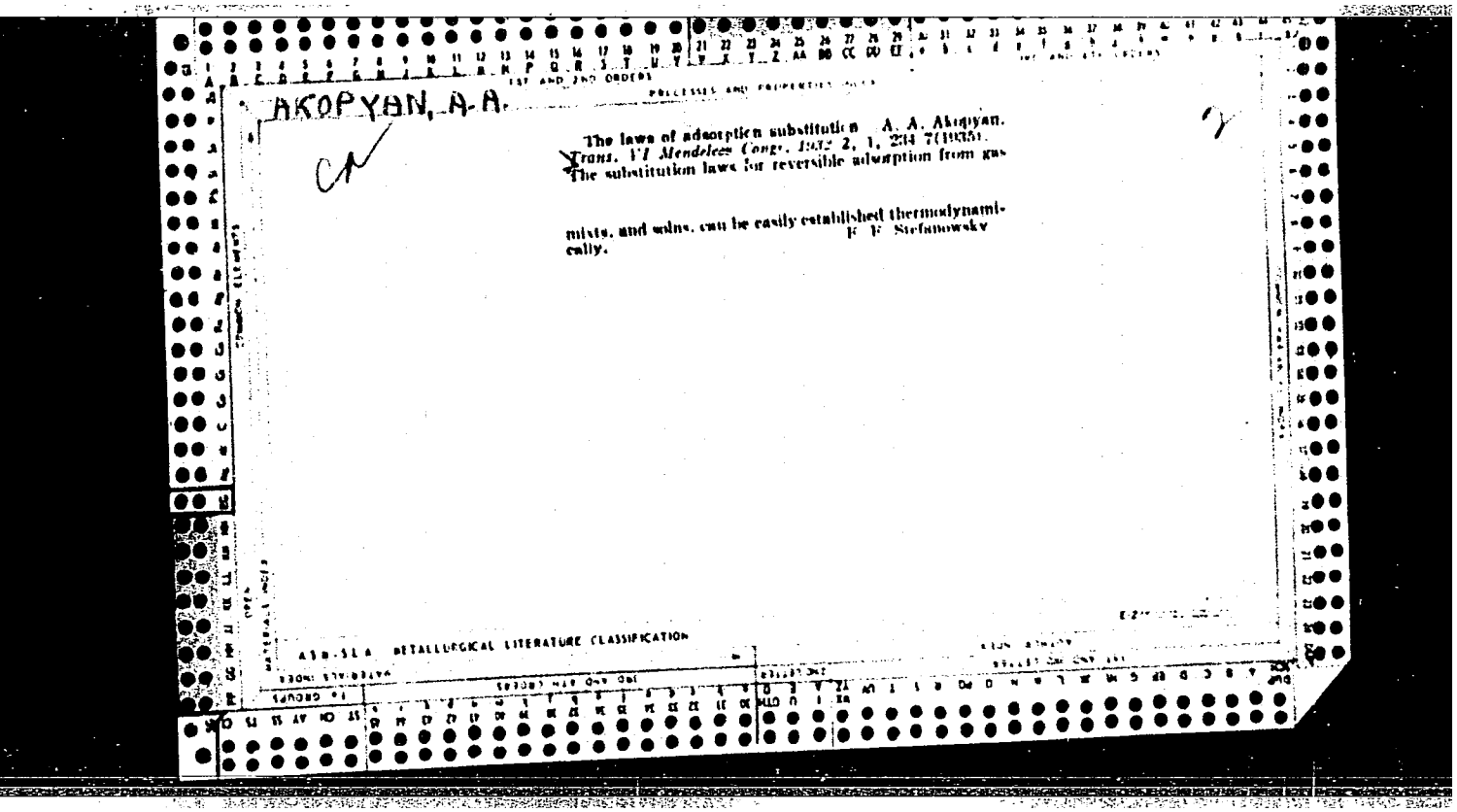

1. AKOPYAN A. [A.]

2. USSR (600)

4. Thermodynamics

7. Application of thermodynamics in the theory of solutions, Soob.Inst.mat. i mekh. AN Arm SSR no.3, 1948.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, unclass.

AKOPYAN, A. [A.]

Akopyan, A. "On a single expression of the laws of the displacement of thermodynamic equilibrium," Doklady (Akad. nauk Arm. SSR), Vol X, No. 2, 1949, p. 75-80, Resume in Armenian).

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

AKOPYAN, Aleksandr Arkad'yevich; ARMAND, A.A., redaktor; VORONIN, K.P. tekhnicheskiy redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor.

[General thermodynamics] Obshchaia termodinamika. Moskva, Gos. energ. izd-vo, 1955. 696 p. (MLRA 8:8)
(Thermodynamics)

24(8)

AUTHOR: Akopyan, A.A. SOV/22-12-2-7/8

TITLE: On the Second Principle of Thermodynamics

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1959, Vol 12,Nr 2, pp 117-133 (USSR)

ABSTRACT: The paper is devoted to the foundations of the phenomenological thermodynamics. The author states that the deduction of the second principle of thermodynamics from the postulates of Clausins, Thomson, Carathéodory etc. implies necessarily that the entropy increases in all the irreversible adiabatic processes : $d_a S > 0$. This, however, contradicts the fact that in certain irreversible adiabatic processes of the microcosm the entropy decreases. The author uses this contradiction in order to show : 1.) The existence of the entropy can be established, if it is assumed that the expression for the quantity of heat supplied to the system possesses an integrating factor depending on the empirical temperature. 2.) The assumption leads to conclusions which

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On the Second Principle of Thermodynamics SOV/22-12-2-7/8

coincide with the modern knowledge .
There are 11 references, 2 of which are Soviet, 3 German, and 6 English.

SUBMITTED: November 19, 1958

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S/022/59/012/05/09/009

AUTHOR: Akopyan, A.A.

TITLE: Didactic Remarks on Thermodynamics

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1959, Vol 12, No. 5, pp. 115-128

TEXT: The author states that the postulate of Thomson is the most general one of the three postulates of Clausius, Caratheodory and Thomson and that from it there follows the total second principle of thermodynamics. Furthermore he states that the proof of the phase rule of Gibbs given in (Ref. 3) is worthless, since the assumptions made are consequences of the phase rule to be proved. Some related questions are treated. Konovalov is mentioned in the paper.
There are 2 figures, and 6 references: 2 Soviet, 1 German, 2 American and 1 English.

SUBMITTED: March 30, 1959

Card 1/1

AKOPYAN, A.A.

A unified law of the shifting of equilibrium. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 15 no.5:99-117 '62. (MIRA 15:11)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Thermodynamics) (Equilibrium)

AKOPYAN, Aleksandr Arkad'yevich; STUKOVNIN, N.D., red.; GARINA, T.D., tekhn. red.

[Chemical thermodynamics] Khimicheskaia termodinamika. Moskva, Gos. izd-vo "Vysshaia shkola," 1963. 526 p. (MIRA 16:7)
(Thermochemistry)

TITLE: Concerning the number of diagrams for one- and two-particle

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,

TOPIC TAGS: Green function, Feynman diagram, fermion interaction,

ABSTRACT: It is shown that knowledge of the number of topological and non-equivalent connected diagrams in any order of perturbation theory makes it possible to study the convergence of the perturbation-theory series. The author

two-particle Green's functions in arbitrary order. Both the sym-

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ACCESSION NR: AP5000325

metrized and the non-symmetrized diagram techniques are considered.
"I thank A. A. Abrikosov and E. I. [illegible]
[illegible] orig. art. has: 3 figures and [illegible] formulas.

ASSOCIATION: Institut poluprovodnikov Akademii nauk UkrSSR (Institute of Semiconductors, Academy of Sciences UkrSSR)

SUBMITTED: 15Feb64 ENCL: 00

SUB CODE: MA, NP NR REF SOV: 003 OTHER: 000

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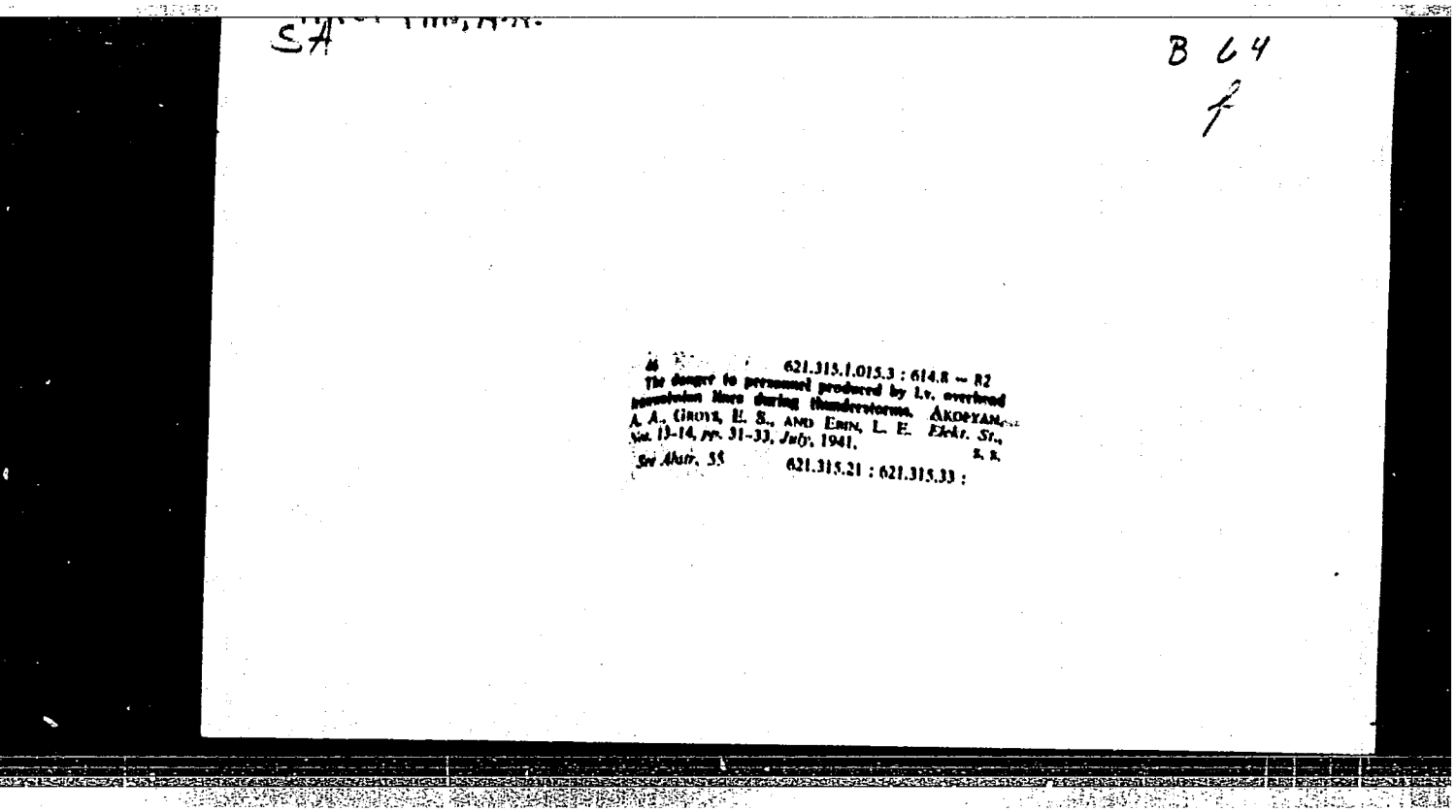
AKOPYAN, A.A.

Number of diagrams for Green's two-particle function of interacting fermions. Ukr. fiz. zhur. 10 no.5:508-511 My '65. (MIRA 18:5)

1. Institut poluprovodnikov AN UkrSSR, Kiyev.



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621.315.1.015.3 : 614.8 — 82

The danger to personnel produced by l.v. overhead transmission lines during thunderstorms. AKOPYAN, A. A., GROZA, E. S., AND ERIN, L. E. *Elektr. St.*, No. 13-14, pp. 31-33, *July*, 1941.

Sci Abstr. 55 621.315.21 : 621.315.33 : S. S.

BABIKOV, M.A., professor; KOMAROV, N.S.; SERGEYEV, A.S.; AKOPYAN, A.A., retsenzent; DOLGINOV, A.I., retsenzent; BAPTIDANOV, L.N., redaktor.

[Textbook on high voltage technology] Tekhnika vysokikh napriazhenii. Pod. red. M.A.Babikova. Moskva, Gos. energ. izd-vo, 1947. 312 p. (MLRA 7:4)

(Electric engineering)

AKOPYAN, A A

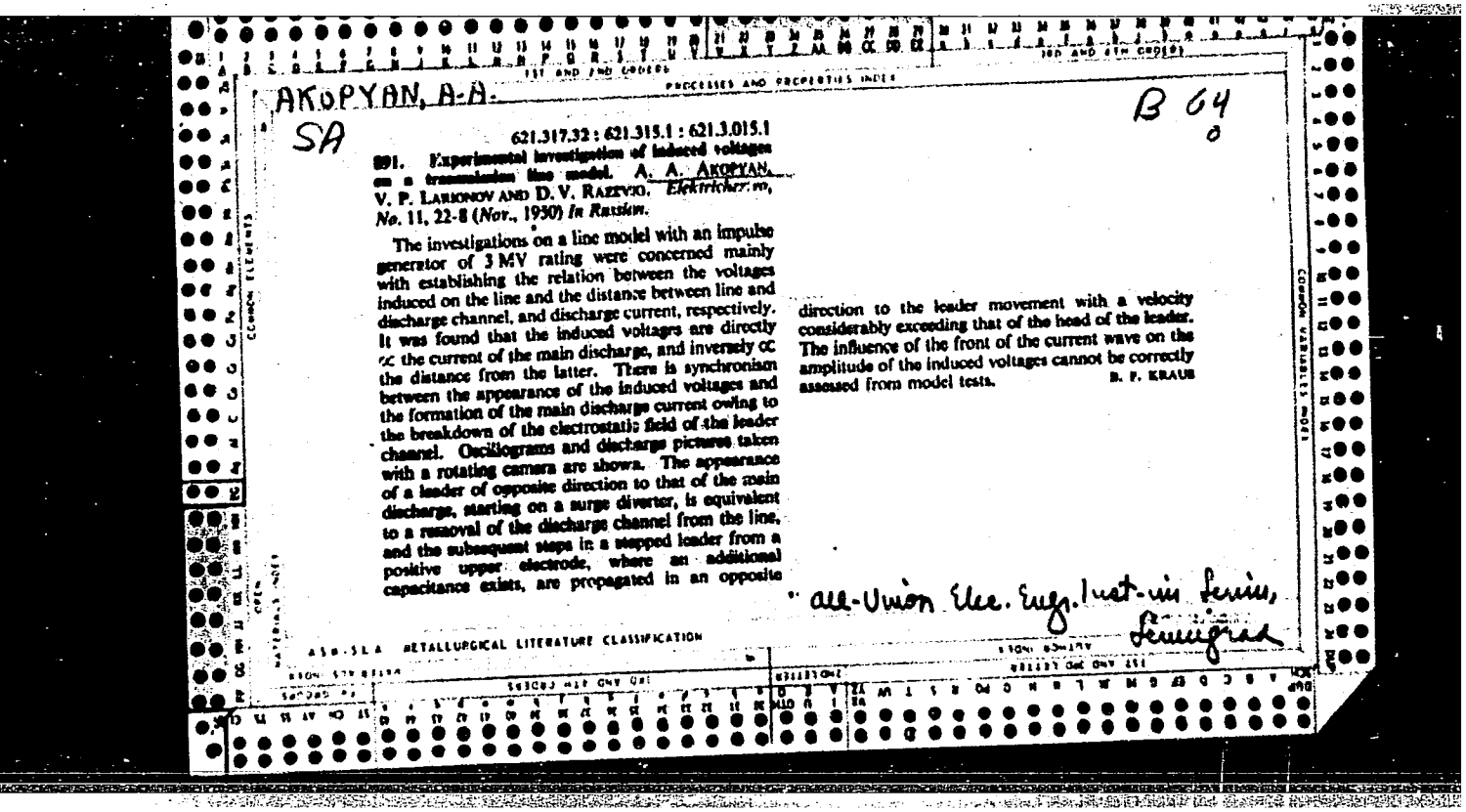
N/5
663.5
.A4

Razrusheniye maslyanykh vyklyuchateley pri vyklyucheni i kholostykliniy elektroperedachi vysokogo napryazheniya (Destruction of oil circuit breakers on switching off high tension open transmission lines. N.P.) Gosenergoizdat (19487)
20 P.
At head of title: Mezhdunarodnaya konferentsiya po bol'shim elektricheskim setyam. 12 sessiya, Paris, 1948.
T.p. in Russian, English and French

AKOPYAN, A. A.

"Switching Off Unloaded High-Voltage Line by ah Oil Switch Having a Blast Chamber," Elektrichestvo, No.2, 1948

Cand. Mech. Sci.
All-Union Electrotech. Inst. im. Lenin.



AKOPYAN, A.A.

SA

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621.317.32 : 621.315.1 : 621.3.015.1

891. **Experimental investigation of induced voltages on a transmission line model.** A. A. AKOPYAN, V. P. LARIONOV AND D. V. RAZEVIG. *Elektrichestvo*, No. 11, 22-8 (*Nov.*, 1950) *In Russian.*

The investigations on a line model with an impulse generator of 3 MV rating were concerned mainly with establishing the relation between the voltages induced on the line and the distance between line and discharge channel, and discharge current, respectively. It was found that the induced voltages are directly ∝ the current of the main discharge, and inversely ∝ the distance from the latter. There is synchronism between the appearance of the induced voltages and the formation of the main discharge current owing to the breakdown of the electrostatic field of the leader channel. Oscillograms and discharge pictures taken with a rotating camera are shown. The appearance of a leader of opposite direction to that of the main discharge, starting on a surge diverter, is equivalent to a removal of the discharge channel from the line, and the subsequent steps in a stepped leader from a positive upper electrode, where an additional capacitance exists, are propagated in an opposite direction to the leader movement with a velocity considerably exceeding that of the head of the leader. The influence of the front of the current wave on the amplitude of the induced voltages cannot be correctly assessed from model tests.

B. P. KRAUS

All-Union Elec. Eng. Inst-in Lenin, Leningrad

AKOPYAN, A. A.

USSR/Electricity - Lightning Studies — Mar 52

"Experimental Study of an Impulse Discharge in a Long Interval," Cand Tech Sci A. A. Akopyan, and Cand Tech Sci V. P. Larionov, All-Union Elec Eng Inst imeni Lenin

"Elektrichestvo" No 3, pp 31-33

PA 240T27

On basis of studies conducted at Lab of Overvoltages of authors' Inst, examines variation with time of leader current and shows that development of positive leader takes place in 2 stages with differing characteristics. Discusses the ratio between the leader charge and quantity of electricity which is neutralized during main discharge. Notes characteristics of the growth of a leader from an electrode of negative polarity. Submitted 21 May 51.

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